

CLAIMS

What is claimed is:

1. A pattern forming method of forming film patterns by arranging droplets of a liquid material on a substrate, the method comprising the steps of:
defining a plurality of pattern forming areas on the substrate in which the film patterns are intended to be formed; and
sequentially arranging a plurality of droplets in the plurality of defined pattern forming areas to form the film patterns,
wherein the droplets are sequentially arranged by setting an arrangement order of the droplets to be substantially equal in the plurality of pattern forming areas.
2. The pattern forming method according to Claim 1,
wherein a plurality of unit areas having a lattice shape in which the droplets are arranged are defined on the substrate, and the droplets are arranged in a predetermined unit area of the plurality of unit areas.
3. The pattern forming method according to Claim 1,
wherein the droplets are arranged essentially simultaneously in the plurality of pattern forming areas.
4. The pattern forming method according to Claim 1,
wherein the film patterns are line-shaped patterns, side portions in a line-width direction of the film patterns are first formed, and then central portions of the film patterns are formed.

5. The pattern forming method according to Claim 1,

wherein the plurality of pattern forming areas are arranged and defined in a predetermined direction, a plurality of discharge portions for arranging the droplets are provided to correspond to the plurality of pattern forming areas, respectively, and the droplets are arranged while moving the discharge portions in the arrangement direction of the pattern forming areas.

6. The pattern forming method according to Claim 1,

wherein the liquid material comprises conductive particles.

7. A pattern forming method of forming line-shaped film patterns by arranging droplets of a liquid material on a substrate, the method comprising the steps of:

defining a plurality of pattern forming areas on the substrate in which the film patterns are intended to be formed; and

arranging the plurality of droplets in the plurality of defined pattern forming areas, the droplets overlapping a part of the pattern forming areas, to form the film patterns,

wherein the arrangement of the droplets is set to be substantially equal in the plurality of pattern forming areas.

8. A pattern forming apparatus comprising:

a droplet discharge device for arranging droplets of a liquid material on a substrate and forming film patterns out of the droplets,

wherein the droplet discharge device sequentially arranges the plurality of droplets in a plurality of pattern forming areas which are pre-defined on the substrate and in which the film patterns are intended to be formed, and when the droplets are sequentially arranged, an arrangement order of the droplets is set to be substantially equal in the plurality of pattern forming areas.

9. A pattern forming apparatus comprising:

a droplet discharge device for arranging droplets of a liquid material on a substrate and forming line-shaped film patterns out of the droplets,

wherein the droplet discharge device arranges the plurality of droplets in a plurality of pattern forming areas which are pre-defined on the substrate and in which the film patterns are intended to be formed, the droplets overlapping a part of the pattern forming areas, and when the droplets are sequentially arranged, the arrangement of the droplets is set to be substantially equal in the plurality of pattern forming areas.

10. A method of manufacturing a device having wiring patterns, the method comprising:

a material arranging step of forming the wiring patterns by arranging droplets of a liquid material in a plurality of pattern forming areas which are defined on a substrate and in which the wiring patterns are intended to be formed,

wherein the material arranging step includes a step of forming the wiring patterns by sequentially arranging the plurality of droplets in the plurality of defined pattern forming areas, and

wherein the droplets are sequentially arranged by setting an arrangement

order of the droplets to be substantially equal in the plurality of pattern forming areas.

11. A method of manufacturing a device having wiring patterns, the method comprising:

a material arranging step of forming the wiring patterns by arranging droplets of a liquid material in a plurality of pattern forming areas which are defined on a substrate and in which the wiring patterns should be formed,

wherein the material arranging step includes a step of forming the wiring patterns by arranging the plurality of droplets in the plurality of defined pattern forming areas, the droplets overlapping a part of the pattern forming areas, and

wherein the arrangement of the droplets is set to be substantially equal in the plurality of pattern forming areas.

12. Conductive film wiring formed using the pattern forming apparatus according to Claim 8.

13. Conductive film wiring formed using the pattern forming apparatus according to Claim 9.

14. Conductive film wiring comprising a plurality of wiring patterns arranged on a substrate,

wherein the plurality of wiring patterns are formed out of a plurality of droplets arranged to overlap a part of the wiring patterns, and the arrangement of the plurality of droplets is set to be substantially equal in the plurality of wiring

patterns.

15. An electro-optical device comprising conductive film wiring according to Claim 12.

16. An electronic apparatus comprising an electro-optical device according to Claim 15.

17. An electro-optical device comprising conductive film wiring according to Claim 13.

18. An electronic apparatus comprising an electro-optical device according to Claim 17.

19. An electro-optical device comprising conductive film wiring according to Claim 14.

20. An electronic apparatus comprising an electro-optical device according to Claim 19.